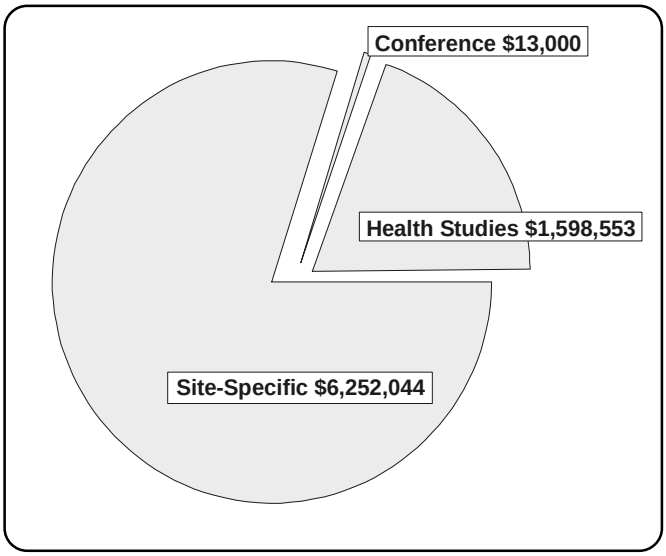
Activities in Minnesota

ATSDR in Partnership with Minnesota

The Agency for Toxic Substances and Disease Registry (ATSDR) is the lead public health agency responsible for implementing the health-related provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). ATSDR is an Atlanta-based federal agency with 400 employees. ATSDR's annual budget for 2002 is $78 million. ATSDR is responsible for assessing the presence and nature of health hazards at specific Superfund sites, helping to prevent or reduce further exposure and illnesses that result, and expanding the knowledge base about the health effects of exposure to hazardous substances.



ATSDR works closely with state agencies to carry out its mission of preventing exposure to contaminants at hazardous waste sites and preventing adverse health effects. ATSDR provides funding and technical assistance for states to identify and evaluate environmental health threats to communities. These resources enable state and local health departments to further investigate environmental health concerns and educate communities. This is accomplished through cooperative agreements and grants. At this time, ATSDR has cooperative agreements and grants with 31 states, 1 American Indian nation (Gila River Indian Community), and 1 commonwealth (Puerto Rico Department of Health). From 1987 through 2001, ATSDR awarded more than **$7,863,597** in direct funds and services to the state of **Minnesota.** In addition to direct funds and services, ATSDR staff provides technical and administrative guidance for state-conducted site activities.

ATSDR Site-Specific Activities

Public Health Assessment-Related Activities

One of the agency's important mandates is to conduct **public health assessments** of all National Priorities List (NPL) sites and of other sites where there might be a significant threat to the public health. In **Minnesota** there have been **44** sites designated to the NPL.

A **public health assessment** provides a written, comprehensive evaluation of available data and information on the release of hazardous substances into the environment in a specific geographic area. Such releases are assessed for current or future impact on public health. ATSDR staff, in conjunction with public health and environmental officials from **Minnesota**, have conducted **63** health assessments in the state.

The following are examples of **public health assessments** conducted in **Minnesota**.

Fridley Commons Well Field - The Fridley Commons Park Well is a 50-acre site with eight public wells owned by the city of **Fridley** in **Anoka County**. The well field serves approximately 29,000 people. Tests have shown contamination of tricholroethylene (TCE) in four of the eight wells. The site was listed as an NPL Superfund site in January 1999. The **Minnesota Pollution Control Agency (MPCA)** is currently in the process of applying

for federal funds to conduct a site investigation and cleanup and has received partial funding from the U.S. Environmental Protection Agency (EPA) to conduct a remedial investigation and feasibility study. So far, no responsible party has been identified.

The **Minnesota Department of Health (MDH)**, under a cooperative agreement with ATSDR, evaluated the public health significance of contamination associated with the well field. MDH has determined that a complete exposure pathway via drinking water exists for TCE. However, based on its review and evaluation of environmental information, records, and a site visit, MDH concluded that the current contaminant exposure levels from drinking water do not pose a current public health hazard.

A **health consultation** is a written or oral response from ATSDR to a specific request for information about health risks related to a specific site, chemical release, or hazardous material. It is a more limited response than a public health assessment. To date, **128** documented health consultations have been conducted at **87** sites in **Minnesota.**

Examples of **health consultations** conducted in **Minnesota** are provided below.

Western Mineral Products - The Western Mineral Products site, located in **Minneapolis**, was used for insulation products manufacturing from 1936 to 1989. The plant received vermiculite ore from Libby, Montana, and processed the ore into insulation, fireproofing material, and other vermiculite products. W.R. Grace acquired the Western Mineral Products Company in 1966. The vermiculite ore from the mine in Libby contained large amounts of naturally occurring asbestos. Under a cooperative agreement with ATSDR, MDH conducted a health consultation identifying health concerns related to asbestos exposure from the site. Workers at the plant were exposed to levels of asbestos in excess of current occupational standards for much of the time the plant was in operation, and cases of asbestos-related disease have been reported in former workers.

Approximately 50 properties around the former plant have been identified as contaminated with asbestos-containing wastes from the site. The EPA is in the process of removing asbestos-contaminated soil from these properties and adjoining alleys. Low levels of asbestos have been detected in some air samples collected around the site. The extent of past and current exposures to asbestos is difficult to estimate at this time. However, based on available information, past exposure to asbestos by workers in the plant, children who played on the piles of waste materials or vermiculite, and residents who lived near the site represents a public health hazard. Current exposure to residual waste materials by residents in the area of the site represents an indeterminate public health hazard. Continued investigation and cleanup of the site and surrounding community is ongoing by EPA, MPCA, and MDH.

St. Paul Residence (Mercury Contamination) - In June 2001, MDH was contacted by the MPCA and a representative of Xcel Energy Company regarding mercury contamination in a private residence in **St. Paul**. A small amount of mercury spilled from a gas regulator removed from a natural gas line in the home's basement by a business under contract to Xcel. Elemental mercury vaporizes and can be inhaled by individuals in the vicinity of a spill. Mercury vapor exposure has been associated with central and peripheral nervous system effects.

Under an ATSDR cooperative agreement, MDH, MPCA, and Xcel assured that the spill was successfully cleaned up. The house was considered safe for reoccupancy in July 2001. Exposure to mercury vapor in the house does not currently represent a public health hazard. MDH recommended that mercury vapor and ambient air sampling be conducted in the house quarterly for at least one year.

Public Health Advisories

If an imminent threat to public health is found during the performance of a public health assessment or health consultation, a **public health advisory** may be issued.

A **public health advisory** is a statement by ATSDR that a substance released into the environment poses a significant risk to human health. It also includes recommended measures to reduce human exposure and eliminate, or substantially mitigate, the significant risk. The advisory is issued to EPA to inform EPA, state and local health officials, and the public about recommended actions at the site. ATSDR has issued **one** public health advisory in **Minnesota.** The following is a description of the advisory.

Waite Park Wells Site - ATSDR and MDH issued a public health advisory in April 1992 when high levels of lead were found at the Burlington Northern Car Shop site in **Waite Park**. The contaminated area was across the street from an elementary school and was accessible to children. In response to a recommendation in the advisory, 108 people were screened for exposure to lead. A public health nurse reviewed the results and referred 26 people to their physicians for follow-up. **Minnesota** officials restricted access to the site, and posted warning signs of potential hazards.

Educating Health Professionals and Community Activities

Another aspect of the cooperative agreement program includes the support of educational activities for physicians and other health professionals and communities concerning human exposure to hazardous substances in the environment. Under the cooperative agreement, MDH has developed approximately 120 different educational tools related to human health issues associated with toxic substances in the environment. More than 58,000 copies were distributed. In addition, over 5,600 **Minnesota** citizens attended about 200 public meetings or training sessions.

During spring 2001, ATSDR assisted MDH in conducting an educational needs assessment to identify community health concerns related to asbestos exposure associated with the former Western Mineral Products Company in **Minneapolis**. Community activities included interaction with community leaders, neighborhood associations, area health professionals, and residents.

In March 2001, physicians representing the **Minnesota** chapter of the American Academy of Pediatrics participated in the groundbreaking session of the National Workshop to Establish an Environmental Safety Net for Children. The workshop was a joint venture between ATSDR and the Committee of Environmental Health of the American Academy of Pediatrics.

Health Studies and Investigations

Health studies are conducted to determine the relationship between exposure to hazardous substances and adverse health effects. They also define health problems that require further investigation through, for example, a health surveillance or epidemiologic study. Following are descriptions of site-specific health studies and investigations that ATSDR has conducted or supported in **Minnesota**.

Exposure to Tremolite Asbestos in Vermiculite Ore: Site-Specific Health Activities – In 2001, MDH, with funding from ATSDR, initiated a population survey to identify and characterize asbestos exposure in the area of the Western Mineral Products Plant in **Minneapolis**. The study involves a door-to-door interview and visual inspection of properties followed by a telephone interview of former residents and others who may have been exposed to vermiculite ore from Libby, Montana. The project may involve as many as 6,000 current, former, and self-referred participants. The MDH is currently in the process of interviewing participants.

Mercury Exposure Among Members of the Fond du Lac Band of Chippewa Indians in Northern Minnesota - ATSDR and the Indian Health Service conducted an exposure study to determine whether members of the Fond du Lac Band of Chippewa Indians were exposed to mercury as a result of eating locally caught fish that had been shown to have elevated levels of methyl mercury. Blood specimens were collected from 238 participants, who were also interviewed about their fish consumption and other risk factors for mercury exposure. The number of fish meals eaten per week and consumption of fish caught in a contaminated section of the St. Louis River was significantly associated with increased blood mercury levels. The final report was published in January 1994.

Minnesota Arsenic Research Study (MARS) - In FY 1997, ATSDR funded MDH to conduct a project designed to measure arsenic levels and a number of geochemical characteristics in well water over an area of **Minnesota** previously shown to have high arsenic groundwater concentrations. The project will obtain data on arsenic levels in private wells in selected areas of **Minnesota** and will also use powerful regression techniques for determination of the relationship between a biomarker of exposure and biomarkers of effect. The final report was published in December 2001.

Hazardous Substances Emergency Events Surveillance System (HSEES) - The Hazardous Substances Emergency Events Surveillance System (HSEES) was established by ATSDR in 1990 to collect and analyze information about releases of hazardous substances that need to be cleaned up or neutralized according to federal, state, or local law, as well as threatened releases that result in a public health action, such as an evacuation. The goal of HSEES is to reduce the morbidity and mortality experienced by first responders, employees, and the general public resulting from hazardous substances emergencies. A total of 16 state health departments were awarded cooperative agreements (Alabama, Colorado, Iowa, Louisiana, **Minnesota**, Mississippi, Missouri, New Jersey, New York, North Carolina, Oregon, Rhode Island, Texas, Utah, Washington, and Wisconsin). HSEES captures data on more than 5,000 events annually. Of these, 80% occur at fixed facilities, and 20% are transportation-related events. Most events occur between 8 a.m. and 5 p.m. Monday through Friday. Persons most often injured are employees. The HSEES system is used to generate information for use by states to conduct the following activities: 1) presentations to industries (such as agriculture) that account for a significant number of spills, to help plan prevention strategies, 2) HazMat training courses, including data on the risk of injury from methamphetamine labs, 3) establish and maintain protection areas for municipal water systems, 4) assist with the proper placement of HazMat teams, 5) develop fact sheets on frequently spilled chemicals or chemicals that cause a disproportionate number of injuries (such as chlorine and ammonia), 6) develop newsletters to industry and responder and environmental groups, 7) and presentations for state and local emergency planners.

Association of Occupational and Environmental Clinics

ATSDR provides financial and technical support to members of the Association of Occupational and Environmental Clinics. This support is provided to improve education and communication related to surveillance, diagnosis, treatment, and prevention of illness or injury related to exposure to hazardous substances. Following are the member institutions in the state of **Minnesota**.

Ramsey Clinic
Occupational & Environmental Health & Occupational Medicine Residency Training
St. Paul, Minnesota

Columbia Park Medical Group
Fridley, Minnesota

Public Health Conference Support

To encourage information sharing, technical discussion, and other training activities related to acute illness and chronic disease in persons exposed to hazardous substances, ATSDR awards grants to state and local agencies to support public health conferences. One such conference has been funded in the state of **Minnesota**. MDH received funds in FY 1994 for a conference on "Assessing Environmental Exposure: The Role of the Public Health Nurse."

Toxicological Profiles

ATSDR develops toxicological profiles that describe health effects, environmental characteristics, and other information for substances found at NPL sites. These profiles describe pathways of human exposure and the behavior of toxic substances in environmental media such as air, soil, and water. Since 1995, **745** profiles have been supplied directly by ATSDR to requesters, including representatives of federal, state, and local health and environmental departments; academic institutions; private industries; and nonprofit organizations in **Minnesota**.

If you would like additional information, contact ATSDR toll-free at (888) 42ATSDR, that is, (888) 422-8737 or visit the homepage at http://www.atsdr.cdc.gov